The Hanover Insurance Group, Inc.

Fourth Quarter 2019 Results

February 5, 2020

To be read in conjunction with the press release dated February 4, 2020 and conference call scheduled for February 5, 2020

The Hanover Insurance Group®

Fourth Quarter and Full Year 2019

Fourth Quarter Net Income and Operating Income(1) of $2.76 and $2.01 per Diluted Share, Respectively; Full Year Net Income and Operating Income of $10.46 and $8.16 per Diluted Share, Respectively; Full Year Combined Ratio of 95.6%; Full Year Combined Ratio, Excluding Catastrophes(2), of 91.8%

- Fourth quarter combined ratio of 96.2%; combined ratio, excluding catastrophes of 93.1%
- Net premiums written increase of 5.6%* in the fourth quarter and 4.5% during the year, reflected growth in more profitable businesses
- Price increases in the quarter of 7.9% in Core Commercial Lines(3) and 5.1% in Personal Lines(4)
- Current accident year loss and loss adjustment expense ("LAE") ratio, excluding catastrophes(5), of 61.8%, in the fourth quarter, reflecting elevated property loss experience, while liability lines continued to perform in line with expectations
- Net investment income of $72.7 million in the fourth quarter, up 4.8% from the prior-year quarter, and $281.3 million for the full year, up 5.2% from the prior year, driven by increased operational cash flows and the temporary investment of proceeds from the Chaucer sale prior to their deployment
- Completed the deployment of the remaining Chaucer equity through a $150 million accelerated share repurchase ("ASR") agreement and a special cash dividend of $2.50 per share announced in December
- On December 5, 2019, the Board of Directors approved an increase to the regular quarterly dividend of 8.3%, to $0.65 per common share
- Book value per share of $75.94, down 2.7% from September 30, 2019, primarily driven by capital actions, including the payment of special and regular cash dividends ($3.15 per share in aggregate), which was partially offset by earnings

(1) See information about this and other non-GAAP measures and definitions used throughout this presentation on the final pages of this document.

The Hanover Insurance Group, Inc. may also be referred to as "The Hanover" or "the Company" interchangeably throughout this presentation

* Unless otherwise stated, net premiums written growth and other growth comparisons are to the same period of the prior year

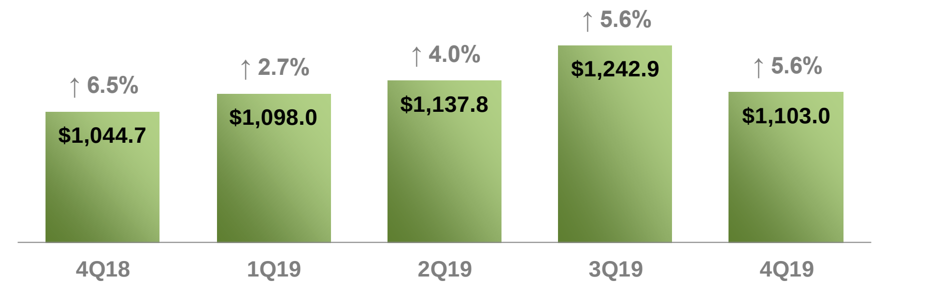
Consolidated Financial Results Snapshot

($ in millions, *except per share amounts)*	Three Months ended December 31, 2018	Three Months ended December 31, 2019	Year ended December 31, 2018	Year ended December 31, 2019
Net income	$123.6	$109.8	$391.0	$425.1
Net income per share	*$2.88*	*$2.76*	*$9.09*	*$10.46*
Operating income before interest and taxes	$93.1	$110.5	$406.5	$453.6
Operating income after taxes	$64.9	$80.2	$292.1	$331.6
Operating income after taxes per share	*$1.51*	*$2.01*	*$6.79*	*$8.16*
Book value per share	*$69.81*	*$75.94*	*$69.81*	*$75.94*
Shareholders' equity	$2,954.7	$2,916.2	$2,954.7	$2,916.2
Debt	$777.9	$653.4	$777.9	$653.4
Total capital	$3,732.6	$3,569.6	$3,732.6	$3,569.6
Debt/Total Capital	20.8%	18.3%	20.8%	18.3%
Total assets	$12,399.7	$12,490.5	$12,399.7	$12,490.5
Net income return on average equity(6)	16.7%	14.6%	13.2%	14.3%
Operating return on average equity(6)	8.6%	11.6%	9.9%	12.0%
Adjusted operating return on average equity(6)	10.9%	11.9%	12.6%	12.8%

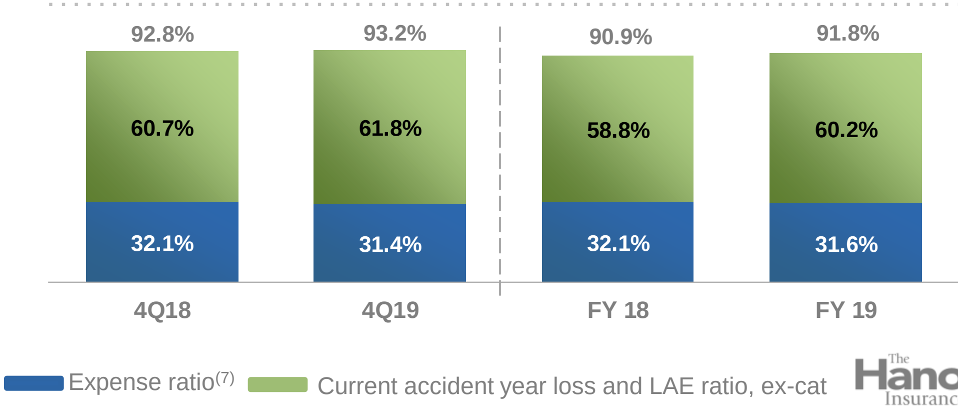
Strong Operating Results

($ in millions)	Three months ended December 31 2018	Three months ended December 31 2019	Year ended December 31 2018	Year ended December 31 2019
Net premiums written	$1,044.7	$1,103.0	$4,384.8	$4,581.7
Growth	6.5%	5.6%	6.7%	4.5%
Net premiums earned	$1,082.0	$1,144.3	$4,254.4	$4,474.5
Combined ratio	97.4%	96.2%	96.1%	95.6%
Combined ratio, ex-cat	92.8%	93.1%	90.9%	91.8%
Current accident year combined ratio, ex-cat[2]	92.8%	93.2%	90.9%	91.8%

($ in millions) **Net Premiums Written and Growth**



Current Accident Year Combined Ratio, Ex-Cat

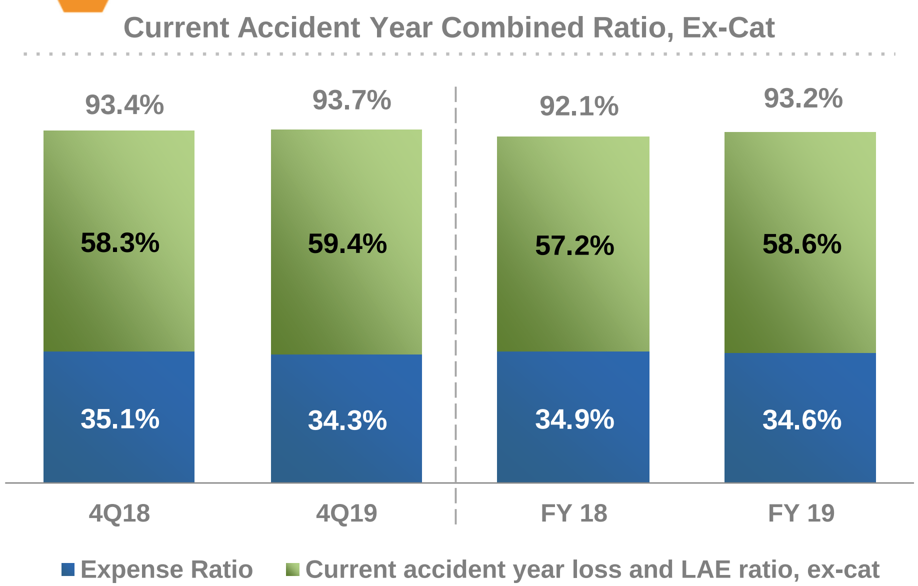


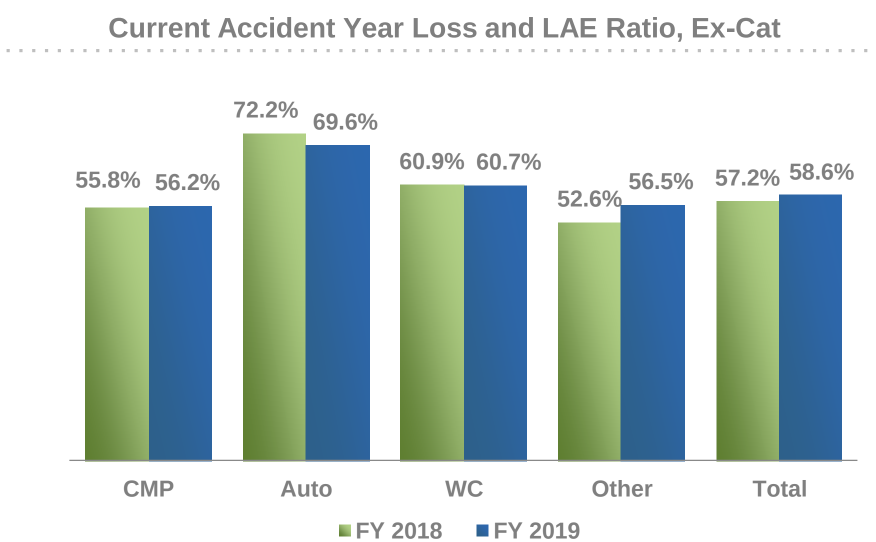
2019 combined ratio of 95.6%, and 91.8%, excluding catastrophes

- Liability trends overall performed in line with expectations
- Elevated property loss experience in several lines, including homeowners and select specialty businesses
- Net prior year loss and LAE development was immaterial, with Commercial Lines favorability offsetting increases in Personal Lines, primarily auto
- Expense ratio improvement of 0.5 points, driven by growth leverage

Net premiums written growth of 4.5%, coming from most profitable businesses

Commercial Lines Underwriting Highlights





- Fourth quarter combined ratio of 96.1%, decreased 2.1 points compared to prior-year quarter
  - Catastrophe losses of 4.1 points, compared to 7.3 points in the prior-year quarter
  - Expense ratio improvement of 0.8 points to 34.3%, primarily attributable to fixed cost leverage from growth
  - Net favorable ex-cat prior year reserve development of $11.6 million, or 1.7 points, driven primarily by workers' compensation, compared to 2.5 points in the prior-year quarter
  - Current accident year loss and LAE ratio, excluding catastrophes, of 59.4%, compared to 58.3% in the prior-year quarter, driven primarily by elevated property losses in commercial multiple peril and certain specialty businesses

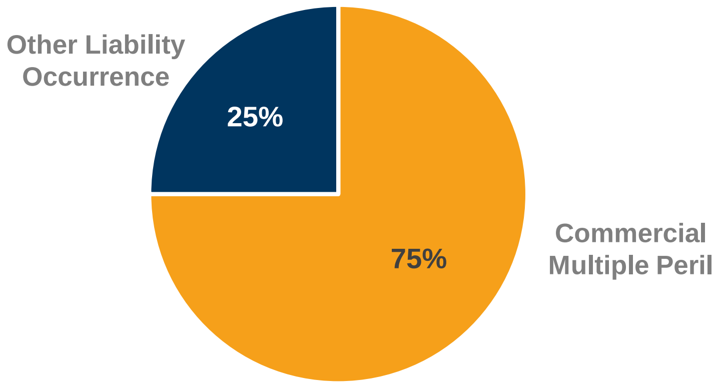
- Full year current accident year loss and LAE ratio, excluding catastrophes, of 58.6%, compared to 57.2% in the prior year, primarily driven by large property losses in specialty

Not Surprised by Social Inflation Trends,
Our Prior Actions and Current Business Mix Mitigate Some of the Impact

- Prior actions:
  - Reduced industry exposure to more vulnerable industries like real estate, retail, hospitality, restaurants
  - Reduced exposure in major metro areas
  - Exited all unsupported monoline umbrella business

- Conservative reinsurance structure with retention of $2 million
- ~90% of General Liability premium at or below $1 million limits
- Majority of Specialty premium is at less than $1 million limits
- Most General Liability coverages are written as part of an account (7 point loss ratio differential between monoline GL and GL written as a part of CMP in Core Commercial)

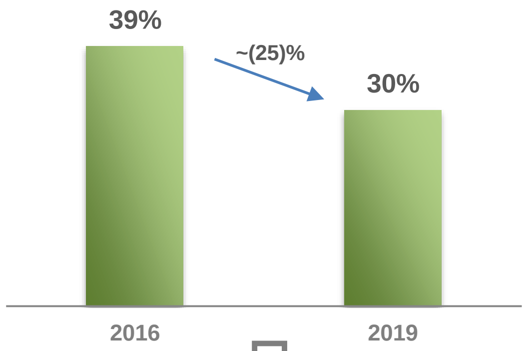
Most of our General Liability Exposure is in Commercial Multiple Peril



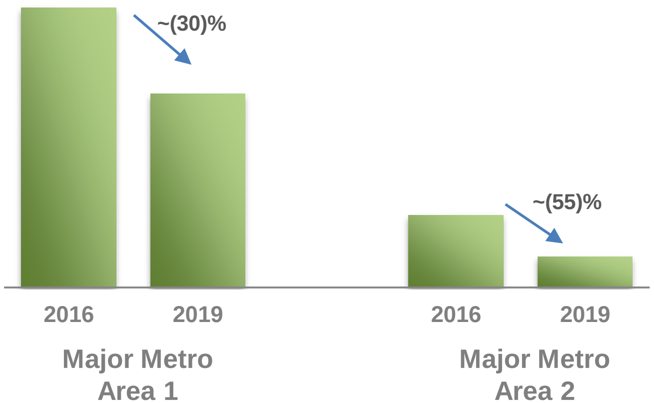
$631m*

Illustrative:

Premium Reduction in Middle Market Real Estate, Retail, Hospitality and Restaurants**



…in More Litigious Geographies**

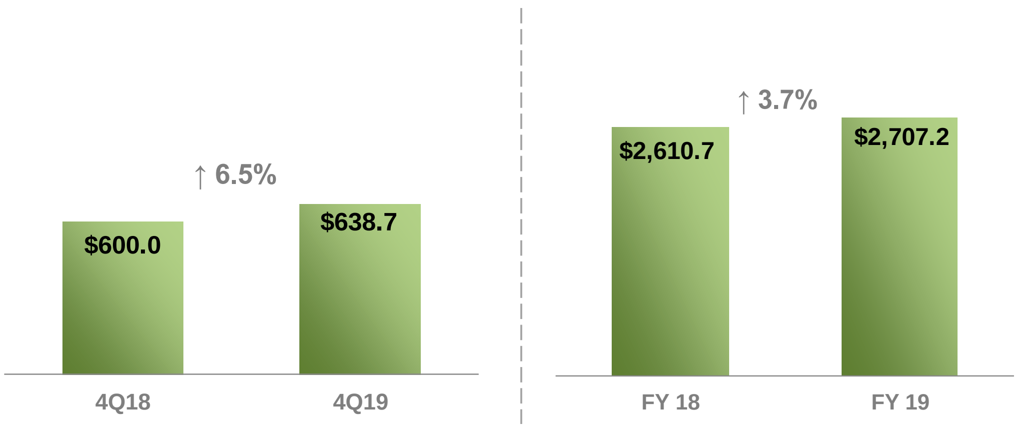


* Based on 2019 Direct Voluntary Written Premium for Core Commercial and Specialty Businesses

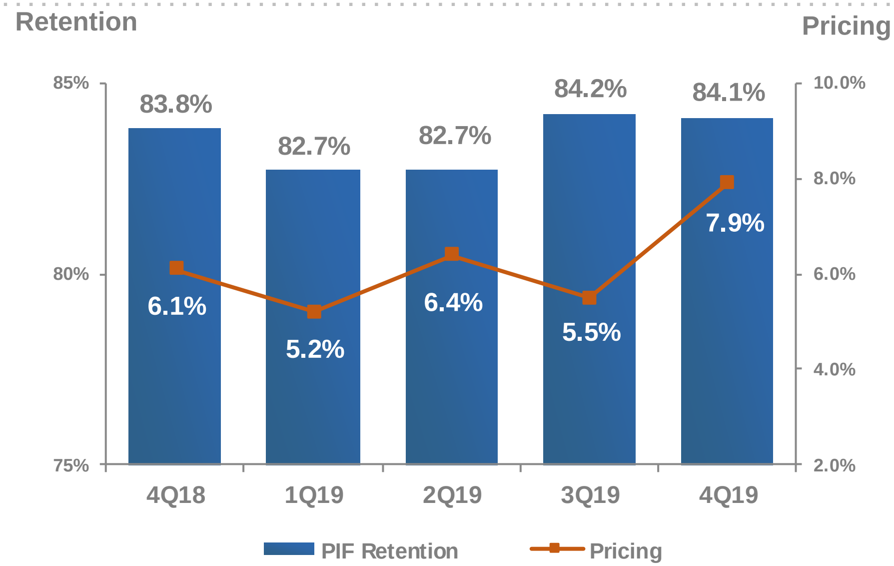
** Both exhibits are based on the company's middle market liability portfolio. It should not be considered an exhaustive list of actions the company has taken over the last several years to help minimize the impact of social inflation and a more litigious environment across its businesses

Commercial Lines Growth Highlights

($ in millions) **Net Premiums Written and Growth**



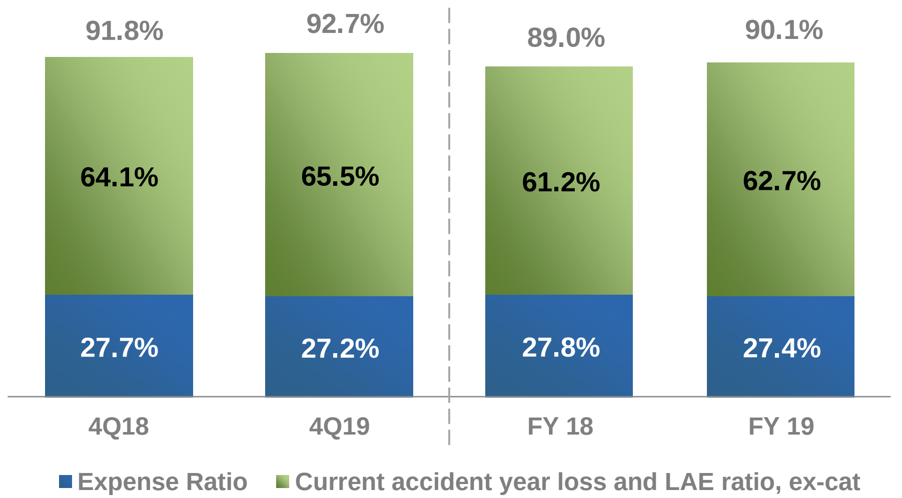
Core Commercial Lines (3)



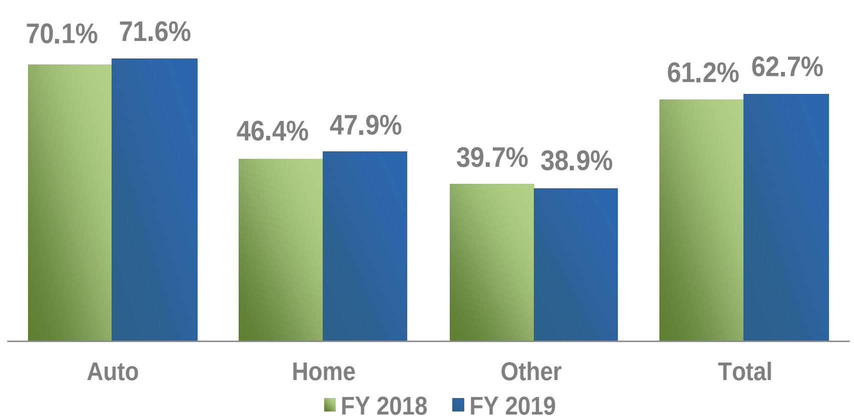
- Net premiums written growth of 6.5% in the quarter, driven by:
  - Growth from more profitable segments, including small commercial and specialty (professional and management liability)
  - Core Commercial pricing increase of 7.9%, driven by both rate and exposure, with retention of 84.1%
- Net premiums written growth of 3.7% in the year, driven by:
  - Core Commercial pricing increase of 6.2% and retention of 83.4%

Personal Lines Underwriting Highlights

Current Accident Year Combined Ratio, Ex-Cat



Current Accident Year Loss and LAE Ratio, Ex-Cat

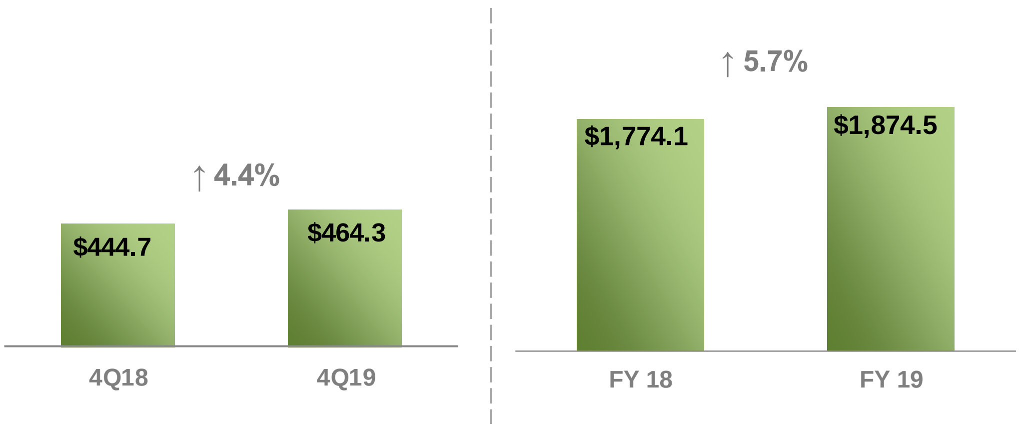


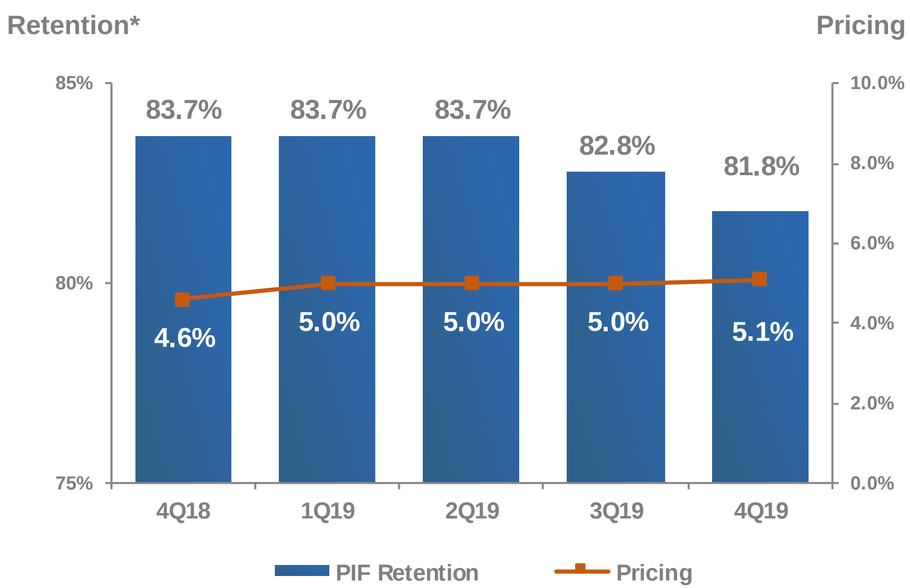
- Fourth quarter combined ratio of 96.5%, increased 0.5 points compared to prior-year quarter
  - Catastrophe losses of 1.6 points, compared to 0.7 points in the prior-year quarter
  - Expense ratio improvement of 0.5 points to 27.2%, primarily due to fixed cost leverage from growth
  - Net unfavorable ex-cat prior year reserve development of $10.2 million, or 2.2 points, driven by auto bodily injury, compared to 3.5 points in the prior-year quarter
  - Current accident year loss and LAE ratio, excluding catastrophes, of 65.5%, compared to 64.1% in the prior-year quarter, driven by:
    - Property losses from non-catastrophe weather in home and auto, and to a lesser extent, auto bodily injury

- Full year current accident year loss and LAE ratio, excluding catastrophes, of 62.7% compared to 61.2% in the prior year, driven by:
  - Property losses, primarily due to non-catastrophe weather in home and comprehensive auto coverages
  - Auto bodily injury severity

Personal Lines Growth Highlights

($ in millions) **Net Premiums Written and Growth**





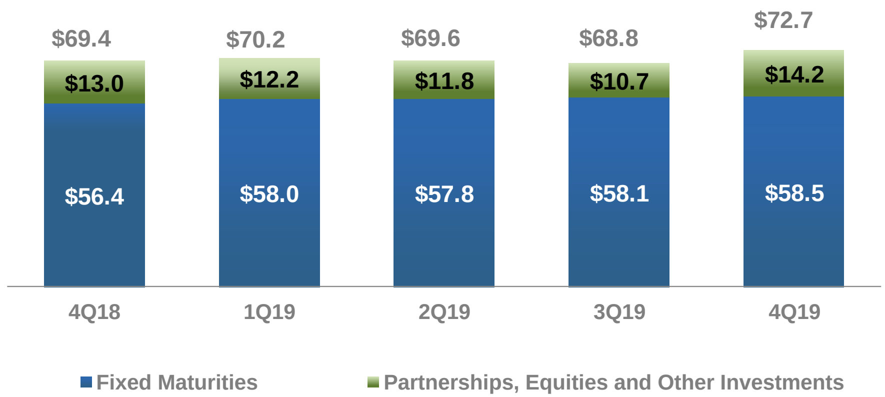
- Net premiums written growth of 4.4% in the quarter, driven by:
  - New business growth and solid rate increases of 5.1%
  - Retention of 81.8%, which decreased slightly due to continued competitive rate environment
  - Policies in force growth of 3.9%
- Net premiums written growth of 5.7% in the year
- Strong quality of growth:
  - Account business is 85% of total book
  - Continue to build momentum in Hanover Prestige brand, with strong premium increases in 2019
  - Robust new business growth due to whole account product offerings

* Retention is defined as ratio of net retained policies for noted period to those policies available to renew over the same period.

Net Investment Income Trends

($ in millions)

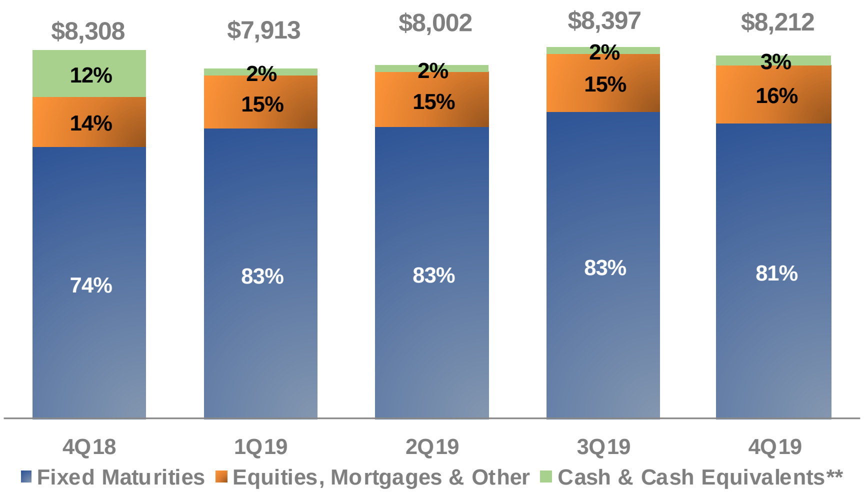
Net Investment Income*



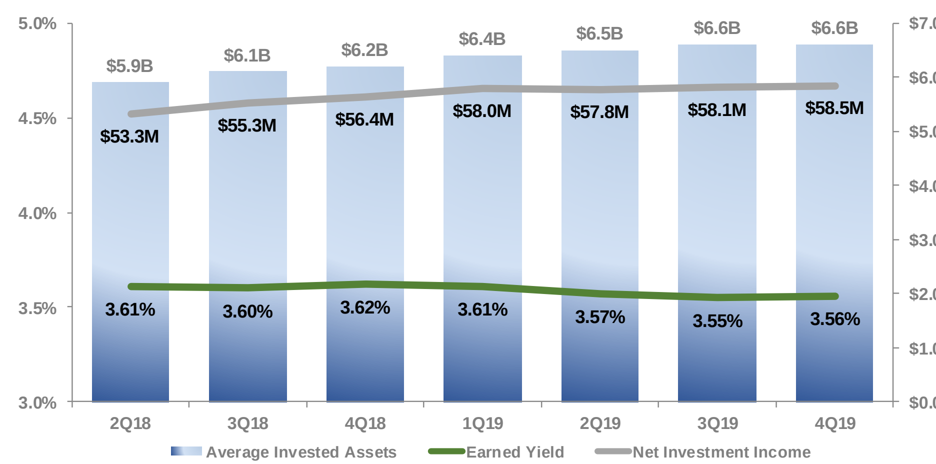
- Net investment income increased 4.8% and 5.2%, in the quarter and full year, respectively, primarily \ driven by:
  - Reinvestment of operating cash flows and temporary investment of Chaucer proceeds
  - Partially offset by lower yields

($ in millions)

Cash and Invested Assets



Fixed Maturity Investment Portfolio Trends



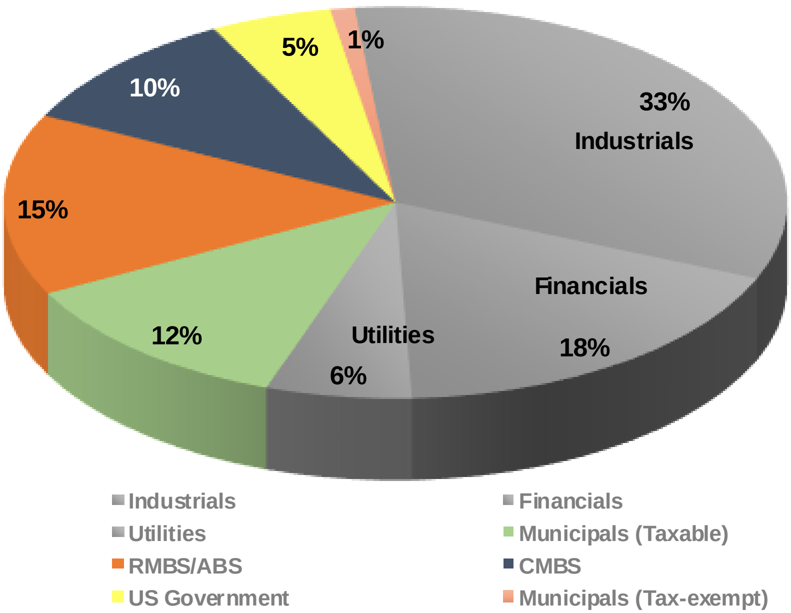
* Net Investment Income from Partnerships, Equities and Other investments is presented net of investment expenses

** Period ended December 31, 2018 also included cash received from the sale of Chaucer, which occurred on December 28, 2018

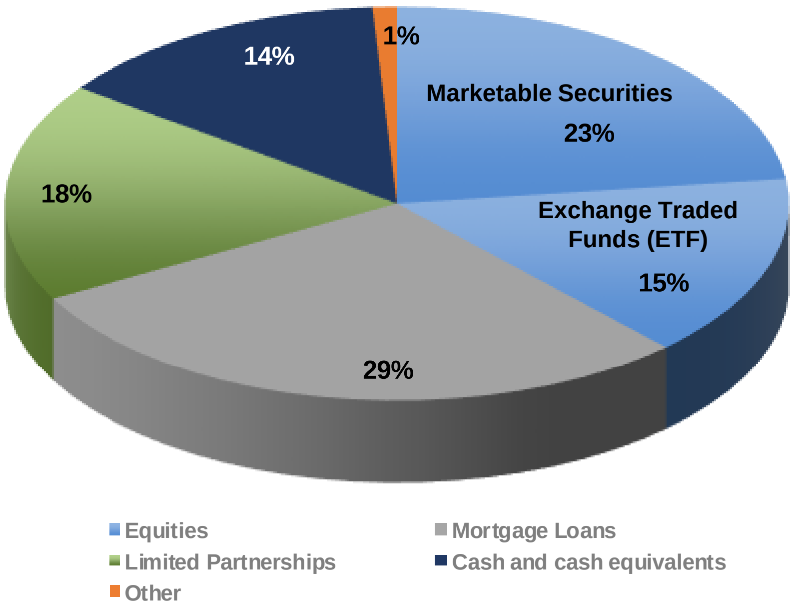
Investment Portfolio Holdings – Total Invested Assets and Cash of $8.2B

As of December 31, 2019

Fixed Maturities: $6.7 Billion



Equities, Cash and Other: $1.5 Billion



Fixed Income Characteristics:

- 95% of fixed maturity securities are investment grade
- Weighted average quality: A+
- Duration: 4.3 years

Book Value Roll Forward

Book value per share down 2.7% from September 30, 2019, primarily driven by capital actions; up 1.4% adding back dividends

	Year ended December 31, 2019
Beginning book value per share (GAAP) *(Shares outstanding: 39.6 million)*	$78.01
Net income	2.76
Change in unrealized gains on investments, net of tax	(0.33)
Ordinary dividends	(0.65)
Special dividend	(2.50)
$150M ASR	(1.64)
Other book value changes - net of timing of ASR*	0.29
Reported ending book value per share (GAAP) *(Shares outstanding: 38.4 million)*	$75.94
Decrease (GAAP)	*-2.7%*
Add: Ordinary and Special Dividends	3.15
Book value per share, adding back impact of dividends (non-GAAP)	$79.09
Growth (non-GAAP)	*1.4%*

* Under the terms of the ASR, the full payment of $150 million was made on December 9, 2019, in conjunction with the delivery of approximately 80% of the shares initially expected to be repurchased. The remaining shares will be delivered before the end of the first quarter of 2020. The timing of the second delivery in an ASR causes additional dilution beyond what is expected under a standard share repurchase program. The timing of the ASR includes a $(0.45) impact, which is an estimate based on the initially expected total number of shares and assumes that the number of shares delivered before the end of the first quarter of 2020 will be equal to 20% of the total shares received under the ASR. The actual impact will be dependent on the actual number of shares delivered.

Operating Return on Equity Calculation and Deployable Equity Balance

Operating ROE = $\dfrac{\text{Annualized period operating income after taxes}}{\text{Average of beginning, ending, and interim quarters' (if applicable) shareholders' equity for the periods presented, excluding net unrealized appreciation (depreciation) on fixed maturity investments net of tax}}$

Adjusted Operating ROE = $\dfrac{\text{Annualized period operating income after taxes, excluding net investment income generated by undeployed Chaucer equity}}{\text{Average of beginning, ending, and interim quarters' (if applicable) shareholders' equity for the periods presented, excluding net unrealized appreciation (depreciation) on fixed maturity investments net of tax and undeployed equity related to Chaucer}}$

Undeployed Equity Balance

- On September 30, 2018, "equity attributable to Chaucer" was $614.6 million, which was used for all prior-periods
- Subsequent to the sale of Chaucer, "equity related to Chaucer" is deemed to be sale proceeds of $850 million
- As of December 31, 2019, all equity from the sale of Chaucer was deployed to shareholders. Shareholders' equity will therefore not be adjusted starting in the first quarter of 2020

Events	Deployable Equity
Sale close (Dec. 30, 2018)	$850.0 million
Less: Special Cash Dividend (Dec. 30, 2018)	$193.4 million
Undeployed equity as of December 31, 2018	$656.6 million
Less: Accelerated Share Repurchase Program (Jan. 2, 2019)	$250.0 million
Undeployed equity as of March 31, 2019	$406.6 million
Less: Accelerated Share Repurchase Program (Jun. 28, 2019)	$150.0 million
Undeployed equity as of September 30, 2019	$256.6 million
Less: Accelerated Share Repurchase Program (Dec. 9, 2019)	$150.0 million
Less: Special Cash Dividend (Dec. 5, 2019)	$100.0 million
Less: Open Market Repurchases	$13.6 million
Year ended December 31, 2019	$0.0 million

About The Hanover

The Hanover Insurance Group, Inc. is the holding company for several property and casualty insurance companies, which together constitute one of the largest insurance businesses in the United States. The company provides exceptional insurance solutions in a dynamic world. The Hanover distributes its products through a select group of independent agents and brokers. Together with its agents, The Hanover offers standard and specialized insurance protection for small and mid-sized businesses, as well as for homes, automobiles, and other personal items. For more information, please visit hanover.com.

Forward-Looking Statements

Forward-Looking Statements and Non-GAAP Financial Measures

Forward-Looking Statements

Certain statements in this document and comments made by management may be "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, may be forward-looking statements. Words such as, but not limited to, "believes," "anticipates," "expects," "projects," "forecasts," "potential," "should," "could," "continue," "outlook," "guidance," and other similar expressions are intended to identify forward-looking statements. Forward-looking statements by their nature address matters that are, to different degrees, uncertain. The Company cautions investors that any such forward-looking statements are estimates, beliefs, expectations and/or projections that involve significant judgement, and that historical results, trends and forward-looking statements are not guarantees and are not necessarily indicative of future performance. Actual results could differ materially from those anticipated.

These statements include, but are not limited to, the Company's statements regarding:

- Uses of capital for share repurchases, special or ordinary cash dividends, business investments or growth, or otherwise, and outstanding shares in future periods as a result of various share repurchase mechanisms, and overall comfort with capital levels;
- The Company's outlook and its ability to achieve components or the sum of the respective period guidance on its future results of operations including: the combined ratio, excluding or including both prior-year reserve development and/or catastrophe losses; catastrophe losses; net investment income; growth of net premiums written and/or net premiums earned in total or by line of business; expense ratio; operating return on equity; and/or the effective tax rate;
- Variability of catastrophe losses due to risk concentrations, changes in weather patterns including global warming, terrorism or other events, as well as the complexity in estimating losses from large catastrophe events due to delayed reporting of the existence, nature or extent of losses or where "demand surge," regulatory assessments, litigation, coverage and technical complexities or other factors may significantly impact the ultimate amount of such losses;
- Current accident year losses and loss selections ("picks"), excluding catastrophes, and prior accident year loss reserve development patterns, particularly in complex "longer tail" liability lines, as well as the inherent variability in property and non-catastrophe weather losses;
- The confidence or concern that the current level of reserves is adequate and/or sufficient for future claim payments, whether due to losses that have been incurred but not reported, circumstances that delay the reporting of losses, business complexity, adverse judgments or developments with respect to case reserves, the difficulties and uncertainties inherent in projecting future losses from historical data, changes in replacement and medical costs, or other factors;
- Characterization of some business as being "more profitable" in light of inherent uncertainty of ultimate losses incurred, especially for "longer tail" businesses;
- Efforts to manage expenses, including the Company's long-term expense savings targets, while allocating capital to business investment, which is at management's discretion;
- Mix improvement, underwriting initiatives, coverage restrictions and pricing segmentation actions, among others, to grow businesses believed to be more profitable or reduce premiums attributable to products believed to be less profitable; balance rate actions and retention; offset long-term and/or short-term loss trends due to increased frequency; increased "social inflation" from a more litigious environment and higher average cost of resolution, increased property replacement costs, and/or social movements;
- The ability to generate growth in targeted segments through new agency appointments; rate increases (as a result of its market position, agency relationships or otherwise), retention improvements or new business; expansion into new geographies; new product introductions; or otherwise; and
- Investment returns and the effect of macro-economic interest rate trends and geopolitical circumstances on new money yields and overall investment returns.

Additional Risks and Uncertainties

Investors are further cautioned and should consider the risks and uncertainties in the Company's business that may affect such estimates and future performance that are discussed in the Company's most recently filed reports on Form 10-K and Form 10-Q and other documents filed by The Hanover Insurance Group, Inc. with the Securities and Exchange Commission ("SEC") and that are also available at www.hanover.com under "Investors." These risks and uncertainties include, but are not limited to:

- Adverse claims experience, including those driven by large or increased frequency of catastrophe events (including terrorism) and severe weather;
- The uncertainty in estimating weather-related losses, and the limitations and assumptions used to model other property and casualty losses (particularly with respect to products with longer tails [such as casualty and bodily injury claims] or involving emerging issues related to losses incurred as the result of new lines of business, such as cyber or financial institutions coverage, or reinsurance contracts and reinsurance recoverables), leading to potential adverse development of loss and loss adjustment expense reserves;
- Litigation and the possibility of adverse judicial decisions, including those which expand policy coverage beyond its intended scope or award "bad faith" or other non-contractual damages, and the impact of "social inflation" affecting judicial awards and settlements;

Forward-Looking Statements and Non-GAAP Financial Measures

Additional Risks and Uncertainties (Continued)

- The ability to increase or maintain insurance rates in line with anticipated loss costs as a result of competition and respective state's department of insurance mandates to either raise or lower rates;
- Investment impairments, which may be affected by, among other things, the Company's ability and willingness to hold investment assets until they recover in value, as well as credit and interest rate risk and general financial and economic conditions;
- Disruption of the independent agency channel, including the impact of competition and consolidation in the industry and among agents and brokers;
- Competition, particularly from competitors who have resource and capability advantages;
- The global macroeconomic environment, including inflation, global trade wars and interest rate fluctuations, which, among other things, could result in reductions in market values of fixed maturity and other investments;
- Adverse state and federal regulation, legislative and/or regulatory actions (including recent significant revisions to Michigan's automobile personal injury protection system and related litigation);
- Financial ratings actions, in particular downgrades to our ratings;
- Operational and technology risks and evolving technological and product innovation, including the risk of cyber-security attacks or breaches on the Company's systems or resulting in claim payments (including from products not intended to intended to provide cyber coverage);
- Uncertainties in estimating indemnification liabilities recorded in conjunction with obligations undertaken in connection with the sale of various businesses and discontinued operations; and
- The ability to collect from reinsurers, reinsurance pricing, and the performance of the discontinued voluntary pools business (including those in the Other segment or in Discontinued Operations).

Investors should not place undue reliance on forward-looking statements, which speak only as of the date they are made, and should understand the risks and uncertainties inherent in or particular to the Company's business. We do not undertake the responsibility to update or revise our forward-looking statements.

Non-GAAP Financial Measures

The discussion in this presentation and the associated conference call of The Hanover's financial performance includes reference to certain financial measures that are not derived from generally accepted accounting principles, or GAAP, such as operating income, operating income before taxes (and interest expense), combined ratios and loss ratios, excluding catastrophes and/or prior-year development and accident year loss ratios, excluding catastrophes. A reconciliation of non-GAAP measures to the closest GAAP measure is included in the end notes to this presentation, the press release dated February 4, 2020 or the financial supplement, which are posted on our website. The reconciliation of current accident year loss ratio and combined ratio excluding catastrophes to the most directly comparable GAAP measure, total loss ratio and combined ratio, is found in the end notes on the final pages of this document. Operating income (operating income per diluted share) is a non-GAAP measure. It is defined as net income excluding the after-tax impact of net realized and unrealized investment gains and losses, as well as results from discontinued operations, divided by, in the case of per share reported figures, the average number of diluted shares of common stock. In referral to one of the Company's three segments, operating income is segment income before taxes.

Operating return on equity ("ROE") and adjusted operating ROE are non-GAAP measures. See end note (6) for a detailed explanation of how these measures are calculated. Operating ROE is based on non-GAAP operating income and adjusted operating ROE is a measure of operating income as a return on only the portion of shareholders' equity attributable to continuing operations, and therefore, the "un-deployed equity" attributable to Chaucer is excluded from shareholders' equity and the related net investment income from the reinvestment of the un-deployed equity is excluded from net and operating income. This eliminates the dilutive impact of any excess capital that would have been included in shareholders' equity and net investment income included in operating income for the corresponding periods presented, and which as of year-end has been fully deployed. In addition, the portion of shareholder equity attributed to unrealized appreciation (depreciation) on fixed maturity investments, net of tax, is also excluded. The Company believes that these measures are helpful in that they provide insight to the capital used by, and results of, the continuing business exclusive of interest, taxes and other non-operating items, and, in this case of "adjusted operating ROE", undeployed equity attributed to Chaucer. These measures should not be by construed as substitutes for GAAP ROE, which is based on net income and shareholders' equity of the entire Company and without adjustments.

Book value per share, adding back the impact of dividends, is a non-GAAP measure. Book value per share is the closest GAAP measure which includes the impact of dividends. The Company believes that this measure is helpful to investors in that it provides a better representation of the value generated for shareholders during this time period.

End notes

(1) Operating income (loss) and operating income (loss) per diluted share are non-GAAP measures. See the disclosure on the use of non-GAAP measures throughout this presentation under the heading "Non-GAAP Financial Measures". The following table provides the reconciliation of operating income (loss) and operating income (loss) per diluted share to the most directly comparable GAAP measures, income (loss) from continuing operations and income (loss) from continuing operations per diluted share, respectively, which are then reconciled to net income and net income per diluted share, respectively:

	Three months ended				Year ended			
	December 31, 2018		December 31, 2019		December 31, 2018		December 31, 2019	
(In millions, except per share data)	$ Amount	Per Share Diluted	$ Amount	Per Share Diluted	$ Amount	Per Share Diluted	$ Amount	Per Share Diluted
OPERATING INCOME (LOSS)								
Commercial Lines	$57.4		$73.0		$265.7		$300.1	
Personal Lines	36.5		36.2		146.2		144.9	
Other	(0.8)		1.3		(5.4)		8.6	
Total	93.1		110.5		406.5		453.6	
Interest expense	(11.2)		(9.4)		(45.1)		(37.5)	
Operating income before income taxes	81.9	$1.91	101.1	$2.53	361.4	$8.40	416.1	$10.24
Income tax expense on operating income	(17.0)	(0.40)	(20.9)	(0.52)	(69.3)	(1.61)	(84.5)	(2.08)
Operating income after income taxes	64.9	1.51	80.2	2.01	292.1	6.79	331.6	8.16
Non-operating items:								
Net realized gains (losses) from sales and other	(2.6)	(0.06)	3.9	0.10	(2.7)	(0.06)	4.9	0.12
Net change in fair value of equity securities	(50.1)	(1.17)	31.2	0.78	(43.4)	(1.01)	106.5	2.62
Net other-than-temporary impairment losses on investments recognized in earnings	(1.8)	(0.04)	(0.8)	(0.02)	(4.6)	(0.11)	(2.0)	(0.05)
Loss from repayment of debt	(26.3)	(0.61)	-	-	(28.2)	(0.65)	-	-
Other	-	-	(2.0)	(0.04)	-	-	(3.4)	(0.08)
Income tax benefit (expense) on non-operating items	18.0	0.42	(2.3)	(0.06)	25.8	0.60	(8.6)	(0.21)
Income from continuing operations, net of taxes	2.1	0.05	110.2	2.77	239.0	5.56	429.0	10.56
Discontinued Operations (net of taxes):								
Sale of Chaucer business	131.9	3.08	1.4	0.03	131.9	3.07	(1.2)	(0.03)
Income (loss) from Chaucer business	(10.5)	(0.25)	-	-	20.0	0.46	1.6	0.04
Income (loss) from discontinued life businesses	0.1	-	(1.8)	(0.04)	0.1	-	(4.3)	(0.11)
Net income	$123.6	$ 2.88	$109.8	$ 2.76	$391.0	$ 9.09	$425.1	$ 10.46
Weighted average shares outstanding		42.9		39.8		43.0		40.6

End notes continued

(2) Combined ratio, excluding catastrophes, and current accident year combined ratio, excluding catastrophes, are non-GAAP measures. The combined ratio, excluding catastrophes is equal to the combined ratio, excluding catastrophe losses. The current accident year combined ratio, excluding catastrophes, is equal to the combined ratio, excluding catastrophe losses and prior-year reserve development. These measures are used throughout this document. The combined ratio (which includes catastrophe losses and prior-year reserve development) is the most directly comparable GAAP measure. The following is a reconciliation of the GAAP combined ratio to the combined ratio, excluding catastrophes losses, and the current accident year combined ratio, excluding catastrophe losses:

	Three months ended December 31, 2019		
	Commercial Lines	Personal Lines	Total
Total combined ratio	96.1%	96.5%	96.2%
Less: Catastrophe loss ratio	4.1%	1.6%	3.1%
Combined ratio, excluding catastrophe losses	92.0%	94.9%	93.1%
Less: Prior-year reserve development ratio	(1.7%)	2.2%	(0.1%)
Current accident year combined ratio, excluding catastrophe losses	93.7%	92.7%	93.2%
	December 31, 2018		
Total combined ratio	98.2%	96.0%	97.4%
Less: Catastrophe loss ratio	7.3%	0.7%	4.6%
Combined ratio, excluding catastrophe losses	90.9%	95.3%	92.8%
Less: Prior-year reserve development ratio	(2.5%)	3.5%	-
Current accident year combined ratio, excluding catastrophe losses	93.4%	91.8%	92.8%

	Year ended December 31, 2019		
	Commercial Lines	Personal Lines	Total
Total combined ratio	95.2%	96.3%	95.6%
Less:			
Catastrophe ratio	3.1%	4.7%	3.8%
Combined ratio, excluding catastrophe losses	92.1%	91.6%	91.8%
Prior-year reserve development ratio	(1.1%)	1.5%	-
Current accident year combined ratio, excluding catastrophe losses	93.2%	90.1%	91.8%
	December 31, 2018		
Total combined ratio	96.4%	95.5%	96.1%
Less:			
Catastrophe ratio	5.6%	4.5%	5.2%
Combined ratio, excluding catastrophe losses	90.8%	91.0%	90.9%
Prior-year reserve development ratio	(1.3%)	2.0%	-
Current accident year combined ratio, excluding catastrophe losses	92.1%	89.0%	90.9%

End notes continued

(3) Core Commercial business provides commercial property and casualty coverages to small and mid-sized businesses in the U.S., generally with annual premiums per policy up to $250,000, primarily through the commercial multiple peril, commercial auto and workers' compensation lines of business, as reported on the current quarter financial supplement. Price increases in Commercial Lines and Core Commercial Lines represent the average change in premium on renewed policies caused by the estimated net effect of base rate changes, discretionary pricing, inflation or changes in policy level exposure or insured risks.

($ in millions)	Three months ended			Year ended		
	December 31, 2019			December 31, 2019		
	Core Commercial	Other Commercial	Total Commercial	Core Commercial	Other Commercial	Total Commercial
Net premiums written	$369.8	$268.9	$638.7	$1,580.1	$1,127.1	$2,707.2
Net premiums earned	$396.6	$282.9	$679.5	$1,550.0	$1,104.2	$2,654.2
	September 30, 2019					
	Core Commercial	Other Commercial	Total Commercial			
Net premiums written	$440.3	$306.1	$746.4			
Net premiums earned	$385.4	$278.1	$663.5			
	June 30, 2019					
	Core Commercial	Other Commercial	Total Commercial			
Net premiums written	$367.5	$277.2	$644.7			
Net premiums earned	$385.6	$273.2	$658.8			
	March 31, 2019					
	Core Commercial	Other Commercial	Total Commercial			
Net premiums written	$402.5	$274.9	$677.4			
Net premiums earned	$382.4	$270.0	$652.4			
	December 31, 2018			December 31, 2018		
	Core Commercial	Other Commercial	Total Commercial	Core Commercial	Other Commercial	Total Commercial
Net premiums written	$338.9	$261.1	$600.0	$1,523.3	$1,087.4	$2,610.7
Net premiums earned	$376.3	$268.1	$644.4	$1,491.8	$1,056.6	$2,548.4

(4) Price increases in Personal Lines is the estimated cumulative premium effect of approved rate actions applied to policies available for renewal, regardless of whether or not policies are actually renewed. Accordingly, pricing changes do not represent actual increases or decreases realized by the Company.

End notes continued

(5) Current accident year loss and LAE ratio, excluding catastrophe losses, is a non-GAAP measure, which is equal to the loss and LAE ratio ("loss ratio"), excluding prior-year reserve development and catastrophe losses. The loss ratio (which includes losses, LAE, catastrophe losses and prior-year loss reserve development) is the most directly comparable GAAP measure. The following is a reconciliation of the GAAP loss ratio to the current accident year loss and LAE ratio, excluding catastrophe losses:

Three months ended	Commercial Multiple Peril	Commercial Auto	Workers' Comp	Commercial Other	Commercial Lines	Personal Auto	Home	Other Personal	Personal Lines	Total
December 31, 2019										
Total loss and LAE Ratio	67.1%	72.9%	41.3%	60.3%	61.8%	80.0%	52.0%	36.2%	69.3%	64.8%
Less:										
Prior-year reserve development ratio	(0.6%)	1.7%	(19.7%)	1.8%	(1.7%)	2.8%	1.3%	0.8%	2.2%	(0.1%)
Catastrophe ratio	10.7%	0.2%	-	1.2%	4.1%	0.3%	3.9%	0.8%	1.6%	3.1%
Current accident year loss ratio, excluding catastrophe losses	57.0%	71.0%	61.0%	57.3%	59.4%	76.9%	46.8%	34.6%	65.5%	61.8%
December 31, 2018										
Total loss and LAE Ratio	71.6%	87.8%	36.8%	56.1%	63.1%	77.0%	53.0%	55.2%	68.3%	65.3%
Less:										
Prior-year reserve development ratio	0.9%	11.7%	(21.8%)	(4.1%)	(2.5%)	1.9%	6.0%	9.5%	3.5%	-
Catastrophe ratio	14.7%	-	-	5.9%	7.3%	0.1%	1.7%	1.9%	0.7%	4.6%
Current accident year loss ratio, excluding catastrophe losses	56.0%	76.1%	58.6%	54.3%	58.3%	75.0%	45.3%	43.8%	64.1%	60.7%

Year ended	Commercial Multiple Peril	Commercial Auto	Workers' Comp	Commercial Other	Commercial Lines	Personal Auto	Home	Other Personal	Personal Lines	Total
December 31, 2019										
Total loss and LAE Ratio	63.0%	71.9%	50.7%	58.3%	60.6%	74.0%	61.5%	41.5%	68.9%	64.0%
Less:										
Prior-year reserve development ratio	(0.7%)	1.9%	(10.0%)	0.4%	(1.1%)	1.9%	0.8%	(0.2%)	1.5%	-
Catastrophe ratio	7.5%	0.4%	-	1.4%	3.1%	0.5%	12.8%	2.8%	4.7%	3.8%
Current accident year loss ratio, excluding catastrophe losses	56.2%	69.6%	60.7%	56.5%	58.6%	71.6%	47.9%	38.9%	62.7%	60.2%
December 31, 2018										
Total loss and LAE Ratio	66.4%	79.9%	51.0%	54.9%	61.5%	72.0%	61.2%	48.1%	67.7%	64.0%
Less:										
Prior-year reserve development ratio	(0.1%)	6.9%	(9.9%)	(2.4%)	(1.3%)	1.4%	2.7%	6.2%	2.0%	-
Catastrophe ratio	10.7%	0.8%	-	4.7%	5.6%	0.5%	12.1%	2.2%	4.5%	5.2%
Current accident year loss ratio, excluding catastrophe losses	55.8%	72.2%	60.9%	52.6%	57.2%	70.1%	46.4%	39.7%	61.2%	58.8%

End notes continued

(6) Operating Return on Average Equity and Adjusted Operating Return on Average Equity ("Operating ROE" and "Adjusted Operating ROE") are non-GAAP measures. As illustrated on page 13, operating ROE is calculated by dividing annualized operating income after tax for the applicable period (see under the heading in this presentation "Non-GAAP Financial Measures" and end note (1)), by average shareholders' equity, excluding unrealized appreciation (depreciation) on fixed maturity investments, net of tax, for the stated period (end note (8)). Also, as illustrated on page 13, for Adjusted Operating ROE, shareholders' equity is adjusted for "equity attributable to Chaucer" for measurement periods prior to the close, which occurred on December 28, 2018, for "the [then] undeployed equity" for measurement periods post-close and for net unrealized appreciation (depreciation) on fixed maturity investments, net of tax (end note (8)). Please see end note (8) for a detailed reconciliation of adjusted shareholders' equity with and without both net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and including the payment of the $250 million ASR agreement for the full year 2019 calculation. Additionally, for the calculation of Adjusted Operating ROE, Operating Income, net of tax, is adjusted for the net investment income related to undeployed equity attributable to Chaucer, net of tax. Operating ROE and Adjusted Operating ROE should not be construed as substitutes for GAAP ROE. See calculations in table below, including the calculation of Net Income ROE using net income, annualized, and average shareholders' equity without adjustments:

	Three months ended		Year ended	
Net Income ROE (non-GAAP)	December 31 2018	December 31 2019	December 31 2018	December 31 2019
Net Income (GAAP)	$123.6	$109.8	$391.0	$425.1
Annualized net income* (non-GAAP)	494.4	439.2	391.0	425.1
Average shareholders' equity (GAAP) (end note (8))	2,968.6	3,001.5	2,957.5	2,965.2
Return on equity (non-GAAP)	16.7%	14.6%	13.2%	14.3%
Operating Income ROE (non-GAAP)				
Annualized operating income, net of tax* (end note (1))	$259.6	$320.8	$292.1	$331.6
Average shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and including the ASR payment (end note (8))	3,019.2	2,775.9	2,946.4	2,773.7
Operating return on equity	8.6%	11.6%	9.9%	12.0%
Adjusted Operating Income ROE (non-GAAP)				
Annualized operating income, net of tax* (end note (1))	$259.6	$320.8	$292.1	$331.6
Less: Annualized net investment income related to un-deployed equity attributable to Chaucer, net of tax**	-	6.4	-	9.3
Annualized operating income, excluding the net investment income related to the un-deployed equity attributable to Chaucer, net of tax	259.6	314.4	292.1	322.3
Average adjusted shareholders' equity, excluding both net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and pre-sale, equity attributable to Chaucer; or post-close, un-deployed equity (end note (8))	2,383.6	2,647.6	2,323.4	2,508.5
Adjusted operating return on equity	10.9%	11.9%	12.6%	12.8%

*For three months ended December 31, 2018 and 2019, respectively, annualized net and operating income is calculated by multiplying three months ended net income and operating income, respectively, by four.

**Net investment income related to the un-deployed equity attributable for each quarter is calculated by multiplying the respective quarter's un-deployed equity attributable to Chaucer by the respective quarter's total pre-tax yield, net of tax and dividing by 4. For the calculation of net investment income related to the un-deployed equity attributable to Chaucer for three months ended December 31, 2019, the equity held during the period was multiplied by the quarter's pre-tax yield, net of tax and divided by four. For the year ended December 31, 2019, net investment income related to the un-deployed equity attributable to Chaucer is calculated by adding the respective quarters' net investment income related to the un-deployed equity attributable to Chaucer, net of tax. For the calculation of annualized net investment income attributable to Chaucer for three months ended December 31, 2018 and 2019, net investment income attributable to Chaucer is multiplied by 4.

End notes continued

(7) Throughout this presentation, the expense ratio is reduced by installment and other fees for purposes of the ratio calculation.

(8) Total shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, is a non-GAAP measure. Total shareholders' equity is the most directly comparable GAAP measure, and is reconciled in the table below and on the following page. For the calculation of Operating ROE, the average of total shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, for the beginning, ending, and interim (if applicable) quarters are used. For the calculation of Adjusted Operating ROE, the average shareholders' equity, excluding both net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and "equity attributable to Chaucer" for measurement periods prior to the close, or "undeployed equity" for measurement periods post-close, for the beginning and ending, and interim (if applicable) quarters are used. For the calculation of Operating ROE and Adjusted Operating ROE for the full year 2019 only, the balance at December 31, 2018 was adjusted by the $250 million paid on January 2, 2019 to eliminate the dilutive impact the ASR would have had on unadjusted and adjusted Operating ROE. (see page 13).

	December 31, 2017	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018
Total shareholders' equity (GAAP)	$2,997.7	$2,913.1	$2,939.8	$2,982.4	$2,954.7
Less: net unrealized appreciation (depreciation) on fixed maturity investments, net of tax	205.4	0.3	(48.8)	(74.0)	(27.2)
Total shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax	2,792.3	2,912.8	2,988.6	3,056.4	2,981.9
Less: Pre-sale, equity attributable to Chaucer; or post-close, un-deployed equity	614.6	614.6	614.6	614.6	656.6
Adjusted shareholders' equity, excluding both net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and pre-sale, equity attributable to Chaucer; or post-close, un-deployed equity	$2,177.7	$2,298.2	$2,374.0	$2,441.8	$2,325.3
Quarter Averages					
Average shareholders' equity (GAAP)					$2,968.6
Average shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax					$3,019.2
Average adjusted shareholders' equity, excluding both net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and pre-sale, equity attributable to Chaucer; or post-close, un-deployed equity					$2,383.6
Year-to-date Averages					
Average shareholders' equity (GAAP)					$2,957.5
Average shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax					$2,946.4
Average adjusted shareholders' equity, excluding both net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and pre-sale, equity attributable to Chaucer; or post-close, un-deployed equity					$2,323.4

End notes continued

(8) Continued.

($ in millions)	December 31, 2018	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019
Total shareholders' equity (GAAP)	$2,954.7	$2,927.0	$2,941.1	$3,086.8	$2,916.2
Less: net unrealized appreciation (depreciation) on fixed maturity investments, net of tax	(27.2)	90.7	192.3	235.3	216.0
Total shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax	2,981.9	2,836.3	2,748.8	2,851.5	2,700.2
Less: Payment made on January 2, 2019 for the ASR agreement entered into on December 30, 2018	250.0	-	-	-	-
Total shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and including the ASR payment	2,731.9	2,836.3	2,748.8	2,851.5	2,700.2
Less: Pre-sale, equity attributable to Chaucer; or post-close, un-deployed equity	406.6	406.6	256.6	256.6	-
Adjusted shareholders' equity, excluding both net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and pre-sale, equity attributable to Chaucer; or post-close, un-deployed equity	$2,325.3	$2,429.7	$2,492.2	$2,594.9	$2,700.2
Quarter Averages					
Average shareholders' equity (GAAP)					$3,001.5
Average shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and including the ASR payment					$2,775.9
Average adjusted shareholders' equity, excluding both net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and pre-sale, equity attributable to Chaucer; or post-close, un-deployed equity; and including the ASR payment					$2,647.6
Year-to-date Averages					
Average shareholders' equity (GAAP)					$2,965.2
Average shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and including the ASR payment					$2,773.7
Average adjusted shareholders' equity, excluding both net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, and pre-sale, equity attributable to Chaucer; or post-close, un-deployed equity; and including the ASR payment					$2,508.5

Other Reconciliations

Below is a reconciliation of commercial lines net premiums written to net premiums written, excluding Commercial Auto and Hanover Programs, which is referenced in the company's prepared remarks:

Commercial Lines	Year ended		
	December 31 2018	December 31 2019	Growth
Commercial Lines net premiums written	$2,610.7	$2,707.2	3.7 %
Less:			
Commercial Auto	344.8	336.1	(2.5)%
Program Business	219.0	200.3	(8.5)%
Net premiums written, excluding Commercial Auto and Program Business	$2,046.9	$2,170.8	6.1 %